

REMARKS

[0001] Claims 1, 2, 4-20, 22-29, and 31-40 are pending in the application. Claims 3, 21, and 30 were previously withdrawn from consideration and have been canceled. Claims 1, 4-6, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,781,739 to Bach et al. (hereinafter Bach '739) and U.S. Patent 6,141,660 to Bach et al. (hereinafter Bach '660). Claims 2, 12-15, 19, 20, 22-24, 29, 31-33, and 38-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bach '739, Bach '660, and U.S. Patent 6,665,861 to Francis et al. (hereinafter Francis). Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bach '739, Bach '660, and U.S. Patent Application Publication number 2002/0078255 to Narayan (hereinafter Narayan). Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bach '739, Bach '660, and U.S. Patent 6,560,639 to Dan et al. (hereinafter Dan). Claims 10 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bach '739, Bach '660, and U.S. Patent Application Publication number 2004/0230987 to Snover et al. (hereinafter Snover). Claims 16-18, 25, 26, 34, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bach '739, Bach '660, Francis, and Narayan. Claims 27 and 36 are rejected under 35 U.S.C. §103(a) in view of Bach '739, Bach '660, Francis, and U.S. Patent 6,560,639 to Dan et al. (hereinafter Dan). Claims 28 and 37 are rejected under 35 U.S.C. § 103(a) in view of Bach '739, Bach '660, Francis, and U.S Patent Application Publication Number 2004/0230987 to Snover et al. (hereinafter Snover).

[0002] Applicants have canceled Claims 1 – 2, 4 – 20, 22 – 28, and 38 – 40 in this response. Claims 3, 21, and 30 were canceled previously. Applicants have amended Claims 29 and 34 and added new claims 41 – 42. Applicants are not conceding in this application that the subject matter encompassed in those claims is not patentable in view of the art of record as the present claim amendments and cancellations are only for facilitating expeditious prosecution of

the remaining claims found allowable by the Examiner. Applicants respectfully reserve the right to pursue these and other claims in one or more continuing applications.

AMENDMENTS TO CLAIMS

[0003] Applicants have amended Claim 29 to clarify that the method includes automatically deploying the generated at least one XMI file and middleware application to one or more servers. Support for this amendment is found in the specification at paragraphs 81 – 84.

[0004] Applicants have also added new claims 41 – 42. Support for these claims is found in the specification at least at paragraph 101.

RESPONSE TO CLAIM OBJECTIONS

[0005] Claims 7 and 25 stand objected to due to informalities. Applicants note that these claims have been canceled.

RESPONSE TO CLAIM REJECTIONS UNDER §103(a)

[0006] Claims 29 and 31 – 37, along with new Claims 41 – 42, remain in the present application. Claims 29, 31 – 33, and 36 – 37 stand rejected under different combinations of Bach ‘739, Bach ‘660, Francis, Dan, and Snover. Claims 34, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bach ‘739, Bach ‘660, Francis, and Narayan. Applicants respectfully submit that the present amendments overcome the art of record.

[0007] The Examiner bears the initial burden of establishing a *prima facie* case of obviousness. MPEP at § 2142. To reach a proper determination, the Examiner must step back to the time of invention and determine, in view of the references, if the claimed invention as a whole would have been obvious. Id.

[0008] Furthermore, the factual inquiries for determining obviousness are summarized as follows: 1. Determine the scope and content of the prior art. 2. Determine the

differences between the prior art and the claims at issue. 3. Resolve the level of ordinary skill in the pertinent art. 4. Consider objective evidence present in the application indicative of obviousness or nonobviousness. Graham v. John Deere Co., 383 US 1, 148 USPQ 459 (1966).

[0009] Applicants assert that the Office Action fails to establish a *prima facie* case of obviousness because not all elements of the amended claims are taught or suggested in the art of record and, second, because the factual inquiry of Graham weighs in favor of nonobviousness.

Scope and Content of the Prior Art

Bach '739

[0010] Bach '739 teaches a method and apparatus that enables a browser-based user to communicate with IMS-based applications. Col. 2, 49-51. This communication is provided using IMS Web. IMS Web Studio directs a web client through a series of steps to browse and download MFS source files that is used to produce an input HTML form and C++ classes to parse input strings in a CGI-BIN program created by IMS Web Studio. Col. 2, 62-66. The final output from IMS Web Studio consists of two files: the CGI-BIN program and the input HTML form, which the user installs on the web server to provide access to the IMS application. Col. 3, 9-12.

Bach '660

[0011] Bach '660 teaches a method and apparatus for generating class specifications for an object-oriented application that accesses a hierarchical database such as IMS. Abstract. The class specification is generated using a command line interface of a class definition tool. Col. 5, 37-39. The resulting application program accesses the hierarchical database using an objects framework that models the database such that the program can access the database data using tools such as DL/I. Col. 5, 46-52.

Francis

[0012] Francis teaches an apparatus and method for generating semi-deployed enterprise java beans (EJB). The EJB designer specifies, in metadata in the un-deployed EJB deployment information for the creation of deployment classes in an EJB container. Col. 6, 24-30. Models of the EJB are persisted in XML form. Col. 6, 59-61.

Dan

[0013] Dan teaches a system for web content management based on a server-side application. This web management system includes a front end daemon which can communicate with both a web server and a database and a back end daemon which can communicate with the database and a file system for the web server. Abstract. This system provides users with a platform-independent server-side software package which facilitates the design and maintenance of websites. Col. 2, 1-5. The system allows the user to interface with the management system through a web browser program rather than through a client side application. Col. 2, 6-11.

Snover

[0014] Snover addresses the problem faced by systems administrators having to learn a variety of command and error function formats. For example, some developers use dashes ("-") to separate parameters, while others use slashes ("/"). ¶ 2. The Snover invention is directed to creating an environment where input parameters to commands are requested and processed in a consistent manner and where consistent error messages are provided. ¶ 5. Snover accomplishes this through a reflection based shell which provides a mechanism for specifying grammar for input parameters using a class which can be used by developers. ¶ 6. This allows developers to specify a grammar for the parameters to the command without the need to write logic to parse the command line. ¶ 7.

Differences Between the Prior Art and the Claims at Issue

[0015] Bach '739 does not teach an interface accepting a parameter set provided as a single input. To the contrary, Bach '739 teaches directing a client through a GUI for each application, as shown in the example in Appendix A. As noted in paragraph 13 of the specification, this requires considerable extra work for a user who has numerous applications to work with.

[0016] In addition, Bach '739 does not teach automatically deploying the generated XMI files and middleware application to one or more servers; to the contrary, Back '739 specifically states that the *user* installs the files on the web server. Thus, the user in Bach '739 has additional manual tasks to perform beyond those described above to create the program.

[0017] Applicants also note that Bach '739 does not teach having a plurality of modes such as the batch mode, the novice mode, and the expert mode of claims 35, 41, and 42. By providing multiple modes, the present invention provides a more flexible solution that allows the user to interact with the utility and perform the method in a manner that corresponds to the user's experience and familiarity with the process. Thus, the present invention as claimed allows a far more flexible solution than that proposed by Bach '739.

[0018] Bach '660 does not deal with a method for generating a web interface for MFS-based IMS applications. As such, it fails to teach importing MFS-based IMS source files. Nor does it discuss XMI files or generating XMI files for the MFS-based IMS application. Bach '660 also fails to teach generating a middleware application from an XMI file, or automatically deploying the generated XMI file and middleware application to a server.

[0019] While Francis discusses the use of XMI, it does not teach or discuss generating web interfaces for MFS-based IMS applications. Rather, the problem that Francis addresses is that "if an EJB creator does have information such as how an EJB's persistent fields should be

mapped to a data storage, there is no mechanism to indicate this in the EJB short of creating a deployed bean” that is specific to one server such that the bean is not portable. Col. 1, 60-65. Neither Dan nor Snover deal with the problem of enabling web access to a legacy system.

Level of Ordinary Skill in the Art

[0020] Several considerations are necessary to determine the level of one having ordinary skill in the art. “Factors that may be considered in determining the level of ordinary skill in the art include (1) the educational level of the inventor; (2) type of problems encountered in the art; (3) prior art solutions to those problems; (4) rapidity with which innovations are made; (5) sophistication of the technology; and (6) education level of active workers in the field.” Environmental Designs, Ltd. v. Union Oil Co., 713 F.2d 693, 696, 218 USPQ 865, 868 (Fed. Cir. 1983), cert. denied, 464 U.S. 1043 (1984); *see also*, MPEP § 2141.03.

[0021] Here, the art is software for automatically generating a web interface for an MFS-based IMS application. The education level of the inventors is at least a college degree. The types of problems include allowing access to legacy systems using current web-based technologies. The prior art required extensive GUI work and an operation-per-application approach to generating web access. The speed at which innovations are developed is typical of other areas of the software industry. The technology itself is of normal complexity and requires workers with skill and familiarity with legacy systems and web interfaces. Finally, the education level of workers in the field is generally a college degree in the art.

Evidence Present in the Application Indicative of Obviousness or Non-obviousness

[0022] Most importantly, Applicants note that agreement was reached in the last telephone interview that the proposed amendments (which are made formal by this response) are distinguishing over the art of record. Applicants thank the Examiners for taking the time to

discuss this application and its distinctions in the interview held April 2nd 2008.

[0023] In addition, as discussed above, none of the references teach automatically deploying the generated XMI file and middleware application to one or more servers. To the contrary, Bach '739 actually teaches away from such a deployment, noting that the CGI-BIN program and the input HTML form must be installed by a user on the web server. This creates additional work in addition to manually stepping through the GUI for each application.

[0024] In addition, none of the references cited teach or suggest having multiple modes available for the user, including the batch mode, novice mode, and expert mode, as claimed in claims 34-35 and 41-42. Again, this allows considerable more flexibility than that allowed by the cited references. In essence, the present invention provides a variety of options for the user; a novice may use a GUI-based approach, a more expert user may provide the parameter set as a single entry, and a script or batch may also interface with the present invention to further minimize the need for time-consuming application construction as required by the prior art.

[0025] The present claims clarify the distinctions between the present invention and the prior art. The three references cited would not lead one of skill in the art to the present invention. As such, Applicants respectfully submit that the Claims are patentable over Bach '660, Bach '739, and Francis, and are in condition for allowance.

CONCLUSION

[0026] As a result of the presented amendments and remarks, Applicants assert that the remaining Claims are patentable and in condition for prompt allowance. Should the Examiner require additional information, Applicants respectfully request that the Examiner notify them of any such need. If any impediments to the prompt allowance of the claims can be resolved by a telephone conversation, the Examiner is respectfully requested to contract the undersigned.

Respectfully submitted,

/David J. McKenzie/
David J. McKenzie
Reg. No. 46,919
Attorney for Applicant

Date: April 10, 2008
8 East Broadway, Suite 600
Salt Lake City, UT 84111
Telephone (801) 994-4646
Fax (801) 531-1929